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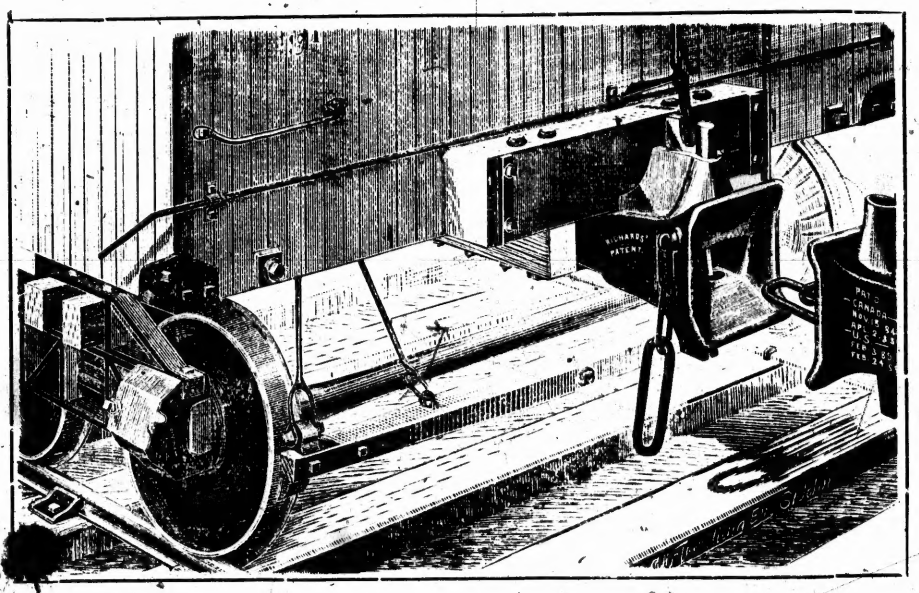
RICHARDS'
AUTOMATIC CAR COUPLER.

INVENTOR: D.L.RICHARDS.- SAINT JOHN, N. B.

Letters Patent Dominion Canada 13th November 1884, and 2 April 1885.
Letters Patent United States .....3rd and 24 February 1885.

All communications may be addressed to
JAS. MURRAY KAY. **P.O.Box, 248** SAINT JOHN,
NEW BRUNSWICK.



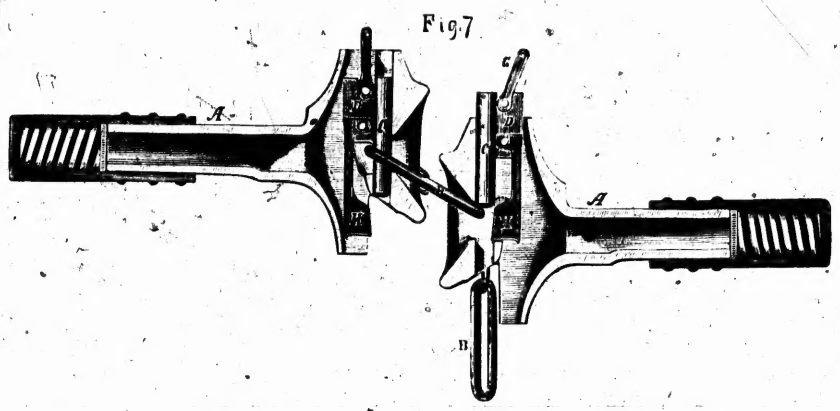
The following are claimed confidently as the merits of this Coupler.

1 It has **simplicity** and **economy** for its lending characteristics.
2 It will **Couple Automatically under all conditions.**
3 It will **Couple Automatically** with the **Old Drawbar.**
4 It will **couple with all other couplers.**
5 It will **couple on any curve** with the **centre** of the drawbar **six inches above** the corresponding **point** in the other Car, regardless of whether the link is **in the low Car, or high Car.**
6 It can be **uncoupled easily** with the little **finger** from either sides or tops of Cars.
7 It can be **set not to Couple.**
8 It will **Uncouple instantaneously, remaining automatic.**
9 It **Cannot uncouple** itself by jarring or straining of Cars **while running.**
10 It has **Links** attached of the **"Standard" size.**
11 It **prevents loss of Links** as these are **attached** to the **sides of the Drawbars.**
12 It saves delay to Trains if Links break on the Road, as "hunting up" others becomes unnecessary.
13 It prevents loss of Pins. These **cannot** be **broken** or **lost.**
14 It has **no internal mechanism.**
15 It will slip into **the place** the **old drawbar** occupies **without any extra work.**
16 It **prevents injury** by the Miller Buffer on a Passenger Engine, **to the lifting-bar.**
17 It meets **all the requirements of the Brakeman** for "making up" or "breaking up" Trains.
18 It quickly **clears the price paid** for it in **saving of Trainmen's time** and in **links** and **pins.**
19 It is **absolutely life saving.**

(over)

Fig. 7. Represents two drawbars varying 6 in., in height, in the act of coupling.

Fig. 7



DESCRIPTION.

THE DRAWBAR is a simple casting, with a wrought iron eye cast on one side for attaching the link.

IT WEIGHS ABOUT 200 LBS, but of course may be made lighter or heavier as required.

IT HAS A 12 BY 9 INCH MUZZLE with an inner link chamber, made up of inclined planes to allow for up and down and side plays of the link when coupling and running.

THE MUZZLE is made 12 inches so that it will couple at a variation of six inches in height. It can be made half that size if required, and then couple at a variation of three inches.

THE SIDES OF THE MUZZLE are cut out a little, so that the C link which holds the Coupling link will not be jammed when two drawbars come together.

IT IS provided with a plain cap to prevent ice or snow lodging in the pin hole.

THE COUPLING LINK is attached to the drawbar by two C links made of 7/8 iron. THIS DEVICE IS PATENTED.

THE OBJECT IS to prevent loss of links, also to facilitate the making up of trains quickly, as Brakemen are not obliged to lose any time "hunting" for links, to make up trains.

THE PIN IS OBLONG, size 2 1/8 by 1 1/2 inches, and 12 inches long. It is made of drop forged steel, and so constructed that it cannot be broken, or get out of order.

THE LATCH OPERATES BY GRAVITY and is made of malleable iron. It is attached to the pin by a 3/4 rivet and in no way can it be injured.

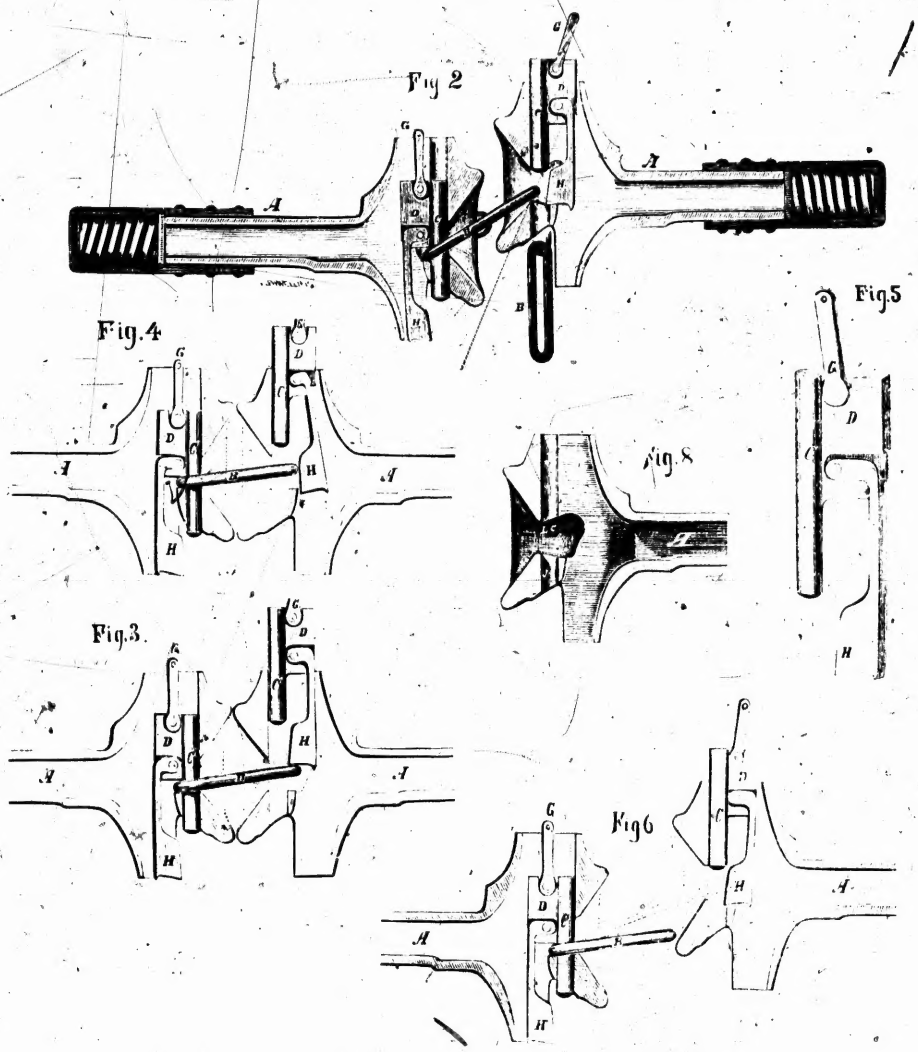
THE HOLE in the latch being off the centre the latch necessarily hangs forward, and is sure to come forward when the pin is lifted, and in the bottom of the link chamber, or on the link if two drawbars are coupled together.

TO COUPLE TWO CARS the link in one drawbar enters the mouth of the other and shoves the latch off the bottom of the link chamber; thereby compelling the pin to drop through the link coupling the two cars.

TO UNCOUPLE. The instant the Brakeman lifts the pin the Car is uncoupled; for it matters not what part of the link chamber the link occupies, the latch will come forward and rest on it until the link is withdrawn, when the pin will then drop into position for coupling.

THE BRAKEMAN may be on top of the Car, or the train may be on a curve, in any case the signal may be given the Engineer to "go ahead" the instant the pin is lifted.

There is no stopping to lock the pin when it is up and so rendering it useless or non-automatic.



DESCRIPTION OF CUTS.

Fig. 1. Represents a drawbar attached to a Car with another about to engage with it.

Fig. 2. Represents a drawbar, with Link, about to engage with another six inches higher.

Fig. 3. Represents two drawbars uncoupled and how they are uncoupled instantaneously.

Fig. 4. Represents two drawbars coupling automatically with the pin falling.

Fig. 5. Represents the pin complete.

Fig. 6. Represents a drawbar with the outer end of the link in line with centre of link chamber the position it always occupies before engaging with another drawbar.

Fig. 7. Represents a drawbar with link about to engage with another six inches lower.

Fig. 8. Represents a drawbar without pin.